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If Moscow Cheats at SALT

Would the U.S. be able to detect it?

From a super-secret missile test base at Tyuratam, near the Aral Sea, a Soviet SS-18 intercontinental ballistic missile roars from its silo, hurtling its ten warheads 5,000 miles toward a target area in the western Pacific. The heat of the rocket's blast triggers infrared sensors aboard a U.S. spy satellite 22,000 miles above Tyuratam. Within seconds, other U.S. facilities are alerted and computer-run electronic equipment on land, planes and ships locks onto the SS-18, monitoring its flight and performance...

This is how the U.S. has been keeping watch on the size, power and other essential characteristics of the Soviet strategic arsenal. Through such observations, Washington would have been able to be pretty confident that Moscow was not cheating under the terms of SALT II. But whether the U.S. can continue to monitor Soviet tests with the same certitude is now being questioned, especially by key U.S. Senators concerned about the loss of two important CIA listening posts in northern Iran. Such worries are making verification a major issue in the SALT II debate even before the treaty has been fully negotiated. Though clearly in its final stages, the accord remains blocked by a few issues that U.S. and Soviet diplomats hope to resolve in the next few days.

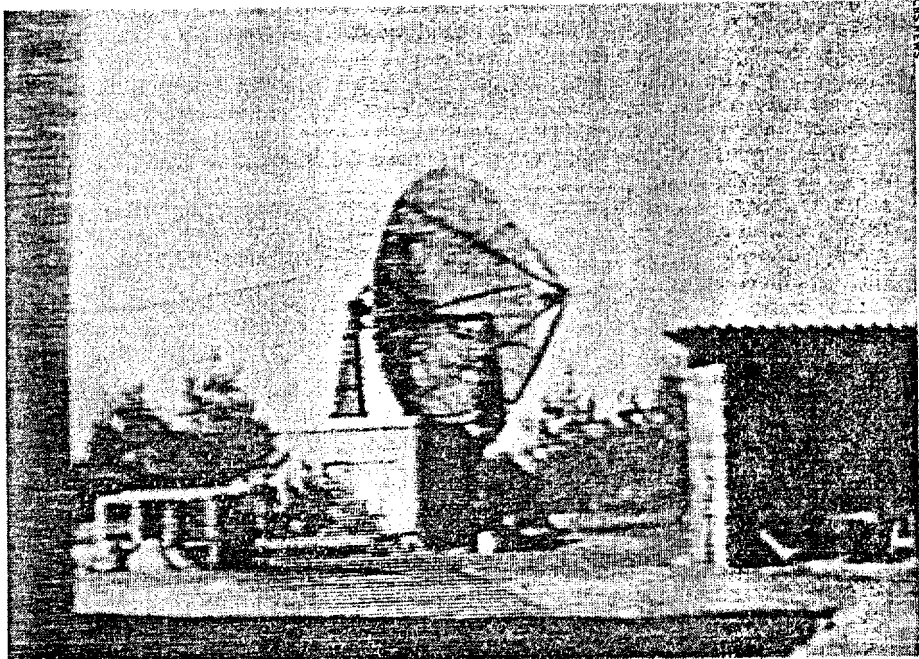
In the Senate, top Administration officials have come under close questioning about verification. The results have been confusing. First, CIA Director Stansfield Turner, testifying at a closed hearing, told the Senate Select Committee on Intelligence that the U.S. would not be able to fully replace the monitoring capabilities lost in Iran until 1984. After this gloomy assessment was leaked last week, Defense Secretary Harold Brown tried to sound more encouraging. He said that even though "regaining all of [the Iranian] monitoring capability... will take until 1983 or 1984," the U.S. will have "enough of it to verify adequately Soviet compliance with the provisions of SALT II [in] about a year."

This hardly stilled the controversy, for Brown appeared to be implying that there would be a yearlong gap in U.S. verification capability. In a clarification the next day, he stressed that while it might take a year to replace the Iranian capabilities that affected SALT, "our verification of Soviet missile developments never consisted solely of monitoring from Iran." Said Brown: "Considering the variety of our monitoring techniques... I'm convinced that we're going to be able to verify a SALT agreement from the moment it is signed and ratified."

Many of the techniques to which Brown referred are highly classified, but certain facts are known. One of the most important monitoring devices is the spy satellite. Constantly on watch, because of

its ability to remain over one place for months, it can not only detect bursts of heat with infrared sensors but also record developments with extraordinarily accurate cameras. These photographs can reveal strategically important changes being made at Soviet missile silos, like modification of the launcher size, and unusual traffic to and from a suspected new missile site. Another of the satellite's most important functions is to tune in on electronic data being relayed from missiles to Soviet tracking stations during tests.

But the U.S. can install considerably more electronic gear in ground listening



U.S. radar on Caspian Sea monitored Soviet missile launchings until closed by Iran

Confusing signals about how long it will take Washington to replace these installations.

posts than can be carried by satellites. This is especially important in monitoring missile launchings and impacts. The sensitive equipment, like sophisticated radar, can calculate an ICBM's length and diameter and thus contribute significantly to SALT II verification. Reason: under the expected terms of the accord, if such dimensions are increased or decreased by more than 5%, the weapon would have to be designated as a "new type" of missile and be subject to a sharp limitation on deployment. (Some critics of SALT caution that the margin of error in measurement still makes it impossible to determine whether Soviet missiles exceed the size limits.)

Missile takeoffs are monitored by ground bases to the west. With the closing of the two sites in Iran, the bases in Turkey are the nearest to the Soviet and on the U.S.S.R.'s Kamchatka Peninsula are watched by the massive radio

and radar installation on Shemya Island in the Aleutians. What made the Iranian posts especially valuable was their proximity to the launch site, thus assuring very accurate reception of telemetry, the performance data being beamed by the test missile. The huge eavesdropping antennas of the Kabkan base in Iran were almost on the Soviet border, only about 650 miles from the Tyuratam test range. By contrast, the Turkish sites are farther from the U.S.S.R. test area, and the Soviet missiles' electronic transmissions are partly blocked by mountains.

While satellites and ground posts gather the bulk of the information to verify Soviet compliance with SALT, some data are also provided by the high-flying U-2 and SR-71 aircraft and the Navy's electronic intelligence vessels. And, of

course, the U.S. still employs such non-technical means as having covert agents in the U.S.S.R. and using Moscow-based diplomats to scrutinize the weaponry paraded through Red Square on May Day.

All U.S. intelligence-gathering sources pick up an enormous amount of information not necessarily related to SALT. These functions, explained Administration officials, were what Director Turner was referring to when he told the Senate committee that it would take until 1984 to replace the Iranian bases. What the Administration did not want to explain was exactly how the U.S. expects to be able to substitute so quickly for the SALT tasks of the Iranian sites.

There is good reason for the Administration's reluctance to talk. Said the Library of Congress's senior defense specialist John Collins: "The public will see just the tip of the iceberg because 90% of ver- up in the press. It's highly classified and it ought to stay that way."